

## CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

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COUNTRY	Hungary	REPORT	
SUBJECT	Titanium Production	DATE DISTR.	21 April 1954
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This is UNEVALUATED Information

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(FOR KEY SEE REVERSE)

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1. Hungarian bauxite in dry condition generally has the following composition:

	<u>Percent</u>
Aluminum oxyde	45 - 65
Silica oxyde	2 - 20
Iron oxyde	5 - 30
Chemically bound water	10 - 25
Titanium oxyde	2 - 2.5

plus small amounts of other metaloxides.

2. In 1952, a total of 85,000 tons of alumina was produced, which resulted in an equal quantity of red mud.
3. The Research Institute for the Metal Industry (Fémipari Kutatóintézet) has been investigating the problem of utilizing the red mud and has perfected a method whereby nitric oxyde, aluminum trioxyde, and ironoxyde can be extracted from the red mud.
4. Titanium dioxide is suitable for the production of ferrotitanium which can be used as a steel alloy. By the aluminum-thermic treatment approximately 50 percent of the titanium content of the titanium oxyde can be extracted. The amount of titanium thus extracted represents approximately one percent of the red mud used for this purpose, in case the end product is ferrotitanium.

25 YEAR RE-REVIEW

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5. However, if titanium oxide is used for the production of pure titanium metal, then approximately 80 per cent of titanium content of the titanium oxide can be extracted. In the latter case, the pure titanium metal produced represents 2 percent of the red mud. In other words, if the entire amount of Hungarian red mud is used for the production of titanium metal, 1,700 tons of titanium metal could be extracted annually on the basis of the red mud production in 1952. It is well known that only a few tenths of one percent of a steel alloy may consist of titanium. As a result, the 1,700 tons cannot all be used by the Hungarian steel production.

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